

# TECH MEMORANDUM

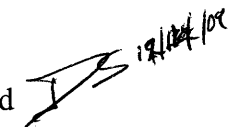
## Utah Coal Regulatory Program

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November 5, 2009

TO: Internal File

THRU: Daron Haddock, Permit Supervisor

FROM: James D. Smith, Environmental Scientist III – Hydrology, Team Lead 

RE: Division Order DO-04 Response, Andalex Resources, Inc., Wildcat Loadout, C/007/0033, Task ID #3365

### SUMMARY:

This proposed amendment, referred to as the 2008 Modification Plan (Task Request Date April 30, 2008) contains a conceptual plan, agreed upon by the Division and Andalex Resources, to address Division Order DO-04, formally known as "Design Drawings and Specifications", which generally relates to the problem of wind-blown fines that have left the permit area during past operations.

It does not include two items that were in the previous submittal (Division Order DO-04/Modification Plan, Task ID #2966):

- 1) An expansion of the primary coal storage pad by about 3.5 acres, the larger storage area around the radial stacker to accommodate increased production from the mines that ship coal through the Wildcat Loadout.
- 2) A new equipment and material storage area of about 6 acres located on the west side of the facility, also needed due to the increased operational requirements.

The main hydrology change involves removal of existing sedimentation pond B and construction of a new pond, G. ASCAs are also being modified. The Permanent Impoundment on the northwest side of the area will not be affected. There are no springs or water wells on or immediately adjacent to the facility. The sedimentation ponds discharge into two branches of a small ephemeral drainage, identified as Wildcat Wash in the UPDES permit, that lie along the east and south sides of the permit area. Wildcat Wash is tributary to Garley Canyon, which reaches the Price River approximately 3 ½ miles to the southeast.

The disturbed area is being increased from 60.94 acres to 73.26 acres. The Permittee is not changing the Permit Area, but is leaving it as it is in the current Permit and MRP

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(approximately 100 acres). The additional disturbance falls within the existing Permit Area Boundary, as shown on Plates 1B and 2A.

The Division has identified the following deficiencies that the Permittee must address:

**R645-301-130, -141, -311**, Plate 29 shows the old and new right-of-way boundaries labeled as "Existing" and "Proposed" permit boundaries, respectively, but the old right-of-way boundary, i.e., the Existing Permit Boundary on Plate 29, will remain the Permit Area Boundary under the proposed amendment, and the new right-of-way boundary is not proposed to be the new permit boundary. The Permittee needs to clarify on Plate 29 that the Permit Area Boundary will still coincide with the old right-of-way boundary rather than the new right-of-way boundary. [JDS]

**R645-301-121.200**, The boundary of BLM right-of-way U-48027 is indicated by a label on Plate 16, but if there is a line on this plate that marks the boundary, it is not apparent. The label also indicates that this apparently non-existent line demarcates the Permit Area Boundary, which is not correct because the old right-of-way boundary (which is shown with a green dashed line on Plate 16) will remain the Permit Area Boundary. The Permittee must clarify these items on Plate 16. [JDS]

**R645-301-130**, The Permittee needs to update the names of the Andalex personnel listed under "In House Consulting Services" in Section R645-301-130. [JDS]

**R645-301-511.110, -542.300**, Section R534-301-510 of the MRP states that Plate 9 shows final reclamation contours and the location of the cross sections that are on Plate 10 and that from those cross sections the mass balance was developed. Plate 10 in the new submittal does not have cross sections; it is a new Reclamation Hydrology map. Cross section locations are on Plate 14, but if the old Plate 10 is removed, there will be no cross sections for mass balance calculations and Tables II-1, II-1A, V-1 and V-1A will become meaningless.

- The Permittee must identify the "final surface configuration maps with cross sections" that show the anticipated final surface configuration for the affected area and that are the source of information used in the mass balance determinations.
- The Permittee must update the information relating to Plates 9 and 10 in Section R645-301-510, Cross Sections, Maps, and Plans on page 5-2. [JDS]

**R645-301-521.163**, Plate 1B must show that the access road from Consumers Road to the Coal Storage Area is part of the Existing Disturbed Area. [JDS]

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**R645-301-521.163**, The Permittee must show the Proposed Disturbed Area Boundary on Plate 1-A; as an alternative, the sections in the MRP which state that Plate 1A shows the disturbed area can be revised to indicate Plate 1B or another plate that shows the disturbed area boundary. [JDS]

**R6345-301-731.730**, The Permittee needs to add the locations for WCW-1, WCW-2, WCW-3, and WCW-4 to Plate 2 (Plate 2A), or revise the text on the pages indicated in the following table that refer to Plate 2. [JDS]

	Section	Page
Surface water monitoring locations are shown on Plate 2.	301.330	3-14
Surface water monitoring stations are included on Plate 2.	301-510	5-1
Surface water monitoring locations are shown on Plate 2.	301-510	5-3
<i>See R645-301-723 and Plates 2A and 15.</i>	722.300	7-8

**R645-301-731.200**, Sections R645-301-711.300, -723, and -731.200 refer to Section R645-301-512.240 for Water Monitoring information. Prior to this amendment, Section 512.240 did contain Water Monitoring Plans, including Tables V-10 and V-11 that listed the parameters and monitoring protocol; however, all that information will be removed from the MRP with this amendment. The revised Section R645-301-512.240 does not contain any information on water monitoring; it does refer to Appendix R, but Appendix R does not contain information on water monitoring, either. It is not evident where information on water monitoring will be located in the revised MRP, if it is in the MRP at all. The Permittee must include a clear and concise water monitoring plan in the revised MRP, including a Reclamation Monitoring Plan. [JDS]

**R645-301-121.200**, Measures to prevent drainage from refuse materials into surface water and ground water are described in section 512.230. Drainage from the refuse pile reports to sedimentation Pond F via ditches D-32, -33, and 34 (Plate 2A); however, Section R645-301-512.230 states that "...Drainage from the [coal processing waste] pile is carried to Pond F via disturbed ditch D-17, which is sized to carry runoff from the pile from a 100 year - 6 hour event as required. (See Table IV-13)". [JDS]

- ditch D-17 reports to Pond C, north of the Coal Storage Area – not Pond F, and
- there is no Table IV-13 in the MRP.

The Permittee must correct these statements. [JDS]

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**R645-301-121.200, -542,** In the discussion on reclamation in Section 240 (Phase I on page 2-16 and Phase II on page 2-19), Section 242.310, and Section 541 (Phase I on page 5-109 and Phase II on page 5-112 and page 5-116), the Permittee needs to add reclamation of Pond G and remove reclamation of Pond B. [JDS]

**R645-301-761, -763.200, -764, -121.200,** The Permittee needs to clarify on Plate 10 that the 2-celled Permanent Impoundment will be left in place for final reclamation: Plate 10 indicates that it will be removed, but the text in the MRP and Plate 9 indicate that it will remain in place at final reclamation. [JDS]

**R645-301-121.200,** Section 711.100 makes reference to Figure VII-1, a generalized stratigraphic section; this figure will be removed from the MRP upon approval of this amendment. The Permittee must provide valid reference for this stratigraphic information. [JDS]

**R645-301-121.200,** Section 645-301-510 makes two references to Figure VII-2; this Figure will be removed from the MRP with approval of this amendment. The Permittee must provide valid references to maps that show the surface and receiving waters, Garley Spring, and the roads. [JDS]

**TECHNICAL ANALYSIS:**

**GENERAL CONTENTS**

**RIGHT OF ENTRY**

Regulatory Reference: 30 CFR 778.15; R645-301-114

**Analysis:**

On February 5, 2007, the BLM amended Andalex Resources' right-of-way, expanding it from 100 acres to 270 acres (Appendix B-Part A-12). In these modifications, the BLM squared-up the 270-acre configuration in part to accommodate its own administrative purposes. Several maps in the submittal, including Plates 1, 1A, 2A, and 29 show both the old and new right of way boundaries. Plate 29 shows the 2 right-of-way boundaries labeled as "Existing" and "Proposed" permit boundaries, respectively, but the old right-of-way boundary, i.e., the Existing Permit Boundary, will remain the Permit Area Boundary (bonded area) under

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the proposed amendment and the new right-of-way boundary is not being proposed as the permit boundary.

The boundary of BLM right-of-way U-48027 is indicated by a label on Plate 16, but if there is a line on this plate that marks the boundary, it is not apparent. The label also indicates that this apparently non-existent line demarcates the Permit Area Boundary, which is not correct because the old right-of-way boundary (which is shown with a green dashed line on Plate 16) will remain the Permit Area Boundary. The Permittee must clarify these items on Plate 16.

Appendix B-Part A-12 contains a copy of the signed right-of-way modification, but it indicates only 250 acres. The BLM corrected the acreage to 270-acre in a letter dated March 23, 2007, a copy of which is also in Appendix B-Part A-12. The permit area, which corresponds with the old right-of-way boundary, is smaller than this new right-of-way.

Andalex' right of-way is non-exclusive and overlaps with other equally valid rights-of-way. For example, a private lease agreement between the Utah Railroad and Andalex Resources grants Andalex the right to enter and conduct loading activities on approximately 13 acres inside the right-of-way that the BLM has leased to the Utah Railroad (Appendix B-Parts A-2, A-3, and A-4).

BLM has granted several other leases or rights-of-way that overlap Andalex' right-of-way: Consumers Road (aka Gordon Creek Road and State Highway 139); the by-pass used when a train that is being loaded blocks Consumers Road; the county's Trestle road along the southeast side of the area; Rocky Mountain Power's 46 KV powerline; and Phillip Petroleum's gas well and pipeline corridor. Appendix B, Part A-5 contains a copy of the letter from Beaver Creek Coal Company that allows Andalex to operate on a small portion of Beaver Creek's (Hidden Splendor Resources, Inc.) leased land.

**Findings:**

Right of Entry information is not sufficient to meet the requirements of the Utah Coal Mining Rules. Before this amendment can be approved, the Permittee must address the following deficiency in accordance with:

**R645-301-130**, Plate 29 shows the old and new right-of-way boundaries labeled as "Existing" and "Proposed" permit boundaries, respectively, but the old right-of-way boundary, i.e., the Existing Permit Boundary on Plate 29, will remain the Permit Area Boundary under the proposed amendment, and the new right-of-way boundary is not proposed to be the new permit boundary. The Permittee needs to clarify on Plate 29 that the Permit Area Boundary will still coincide with the old right-of-way boundary rather than the new right-of-way boundary.

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## LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS

Regulatory Reference: 30 CFR 778.16; 30 CFR 779.12(a); 30 CFR 779.24(a)(b)(c); R645-300-121.120; R645-301-112.800; R645-300-141; R645-301-115.

### Analysis:

The BLM Right of Way is described in the copy of the March 23, 2007 right-of-way modification in Appendix B-Part A-12 and in section R645-301-114 of the MRP, and it is shown on Plate 1A of the MRP.

The MRP states that the Unsuitability Claims criteria do not apply.

### Findings:

Legal Description and Status of Unsuitability information is sufficient to meet the requirements of the Coal Mining Rules.

## PUBLIC NOTICE AND COMMENT

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

### Analysis:

The Division determined the application to be Administratively Complete on May 15, 2008. On May 20, 2008, the Division received a copy of the public notification to be published in the local newspaper. The notice was published in the Sun Advocate May 20, 22, 27, 29, June 3, 5, 10 and 12, 2008 (<http://www.utahlegalnotices.com>; accessed August 26, 2008).

The Division received no comments from the public.

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R645-300-121.150 requires that, if the Applicant seeks a permit to mine within 100 feet of a public road, the public notice must include a concise statement describing the public road. The current operation is within 100 feet of Consumer Road (State Highway 139), but when the Division first issued the Wildcat Loadout a permit in 1989, the Division found that because the loadout had been using Consumers as a coal haul road prior to August 3, 1977, use of the road was subject to a valid existing right and there was no need for public notice. The current proposal includes the new sedimentation Pond G, which is a new surface disturbance within 100 feet of the county's Trestle road. Although this road and the area of the new pond were not specified in the Division's original finding, these are within the current permit area so the valid existing right finding of the initial permit applies. Therefore the Permittee is not required to advertise for mine operations within 100 feet of the right-of-way of a public road.

### Findings:

Public Notice and Comment are adequate to meet the requirements of the Utah Coal Mining Rules.

## PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

### Analysis:

On December 9, 2004 the Division issued DO-04, titled Design Drawings and Specifications, but also known as the issue regarding the wind blown coal-fines. The Division granted successive extensions for the Permittee to respond to the Division Order (due dates were extended to March 10, 2005, December 30, 2005, May 4, 2007, and January 31, 2008). These extensions were given because of more pressing matters for both the Division and Andalex, and also because the Permittee had to wait for the BLM to grant the expanded right-of-way for the site, which required more time than anticipated.

Following the Technical Review of an earlier amendment that produced a long list of deficiencies, the Division suggested to the Permittee that the amendment be broken into two separate actions, one to address only the deficiencies related to DO-04. The Permittee responded with this amendment currently under consideration, the Division receiving it on August 13, 2009 and determining it to be Administratively Complete on August 31, 2009.

In the interim between when the Division issued the DO in 2004 and when the Permittee submitted this response, the Division approved an extensive re-formatting of the Wildcat MRP (May 17, 2006).

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Appendix R contains an all new Sedimentation and Drainage Control Plan.

**Findings:**

Permit Application Format and Contents are adequate to meet the requirements of the Utah Coal Mining Rules.

**REPORTING OF TECHNICAL DATA**

Regulatory Reference: 30 CFR 777.13; R645-301-130.

**Analysis:**

Section R645-301-130 of the MRP lists persons or organizations that collected and analyzed the data. Dan Guy - a registered professional, engineer - prepared the Sedimentation and Drainage Control Plan, Appendix R.

In Section R645-301-130, REPORTING AND TECHNICAL DATA, In House Consulting Services, Samuel C. Quigley is listed as General Manager and Michael W. Glasson as Senior Geologist; they are no longer working at Andalex Resources. This section needs to be updated.

**Findings:**

The Reporting of Technical Data is not in compliance with the requirements of the Utah Coal Mining Rules. Before this amendment can be approved, the Permittee must address the following deficiency in accordance with:

**R645-301-130**, The Permittee needs to update the names of the Andalex personnel listed under "In House Consulting Services" in Section R645-301-130.

**MAPS AND PLANS**

Regulatory Reference: 30 CFR 777.14; R645-301-140.

**Analysis:**

Most maps that have been submitted are stamped, dated, and signed by Dan W. Guy or David W. Hibbs, professional engineers registered in the State of Utah. Plates 12, and 29, which show Geology and Vegetation, respectively, have not been certified. The Coal Mining Rules do



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not require that the vegetation maps be certified by a PE. The geology map would normally require certification, but because there is no coal seam to be mined at the Wildcat Loadout, this particular map, which simply shows surficial geology, does not require certification.

The C1/C2 form lists Plate 2 is to be replaced. There is a new Plate 2A, but no new Plate 2. It isn't clear if the currently approved Plate 2 is to be left in the MRP, if there was supposed to be a new Plate 2 that didn't get included in the submittal, or if there is no Plate 2. The Division asked for clarification on this in order to complete the Initial Review, and in an e-mail dated 8/28/2009 the Permittee gave the following clarification:

...Plate 2 is the existing (currently approved and incorporated) old mylar hydro map. Plate 2A is the new Autocad hydro map, which is a cleaned-up version of the original (Plate 2) map, but also includes the changes that would go along with new construction associated with responding to DO-04. Assuming the DO amendment is approved, and the field changes proposed by the amendment are implemented, then the old mylar Plate 2 will be thrown away (at long last) and will be replaced with the new electronic version (Plate 2A before you now), which will then be renumbered as Plate 2. I know this is somewhat confusing, but it was done this way to ultimately avoid long-term confusion when the DO is taken care of and we finally have an as-built hydrology map on Autocad labeled Plate 2.

(M:\FILES\COAL\PERMITS\007\C0070033\2009\INCOMING\0009.pdf)

Section R534-301-510 states that Plate 9 shows final reclamation contours and the location of the cross sections that are on Plate 10, and that from those cross sections, the mass balance was developed. Plate 10 in the new submittal does not have cross sections; it is a new Reclamation Hydrology map; however, cross section locations are also on Plate 14. The Permittee must clarify the source of information used in the mass balance determination. The Permittee must update the information relating to Plates 9 and 10 in Section R645-301-510, Cross Sections, Maps, and Plans on page 5-2.

**Findings:**

Upon approval of this amendment and completion of the changes to the facility, the Permittee will renumber "Plate 2A" from this submittal as "Plate 2" and will replace the current (Mylar) Plate 2 with this new (AutoCAD) Plate 2. Even so, the proposed amendment does not meet the requirements of the Utah Coal Mining Rules. Before this amendment can be approved, the Permittee must address the following deficiency in accordance with:

**R645-301-511.110, -542.300,** Section R534-301-510 of the MRP states that Plate 9 shows final reclamation contours and the location of the cross sections that are on Plate 10 and that from those cross sections the mass balance was developed. Plate

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10 in the new submittal does not have cross sections; it is a new Reclamation Hydrology map. Cross section locations are on Plate 14, but if the old Plate 10 is removed, there will be no cross sections for mass balance calculations and Tables II-1, II-1A, V-1 and V-1A will become meaningless.

- The Permittee must identify the “final surface configuration maps with cross sections” that show the anticipated final surface configuration for the affected area and that are the source of information used in the mass balance determinations.
- The Permittee must update the information relating to Plates 9 and 10 in Section R645-301-510, Cross Sections, Maps, and Plans on page 5-2.

## COMPLETENESS

Regulatory Reference: 30 CFR 777.15; R645-301-150.

### Analysis:

The Division determined the application to be Administratively Complete on August 31, 2009.

### Findings:

The proposed amendment meets the Completeness requirements of the Coal Mining Rules.

## ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

## PERMIT AREA

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

### Analysis:

The permit area contains approximately 100.19 acres and is located within the 270-acre BLM right-of-way U-48027. The permit area is described in Section R645-301-114: Right-of-Entry Information in the MRP. Plate 1 shows the Permit Area boundary.

The disturbed area will expand from 60.94 acres to 73.26 acres. Section R645-301-830 - Determination of Bond Amount in the MRP states "Bonded areas are shown on Plates 1, 1A, and 1B and further described in R645-301-542". Plate 1 shows the "Existing Disturbed Area Boundary" and Plate 1B shows the "Existing Disturbed Area" (except the road from Consumers Road to the Coal Storage Area is not shown as part of the Existing Disturbed Area) and "Proposed Disturbed Area (DO-04)", but Plate 1A does not show the disturbed area boundary.

Most of Section R645-301-542 references other sections of the MRP. Section 542.320 briefly describes the Permanent Facilities that will be left, i.e., undisturbed diversion UD-1 and the Permanent Impoundment that are being left to provide drainage control for a drainage that was blocked off over 30 years ago by the railroad. Section 542.40 describes Final Abandonment or Bond Release and includes information on Cost of Reclamation, Bond or Surety Arrangement, and an outline of work to be done for Restoration to Pre-mining Land Use. .

### **Findings:**

The proposed amendment does not meet the requirements of the Utah Coal Mining Rules. Before this amendment can be approved, the Permittee must address the following deficiency in accordance with:

**R645-301-521.163**, Plate 1B must show the access road from Consumers Road to the Coal Storage Area is part of the Existing Disturbed Area.

**R645-301-521.163**, The Permittee must show the Proposed Disturbed Area Boundary on Plate 1-A; as an alternative, the sections in the MRP which state that Plate 1A shows the disturbed area can be revised to indicate Plate 1B or another plate that shows the disturbed area boundary.

## **MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

### **Analysis:**

#### **Monitoring and Sampling Location Maps**

The Permittee monitors WCW-1 and WCW-3 in undisturbed drainages above the site and WCW-2 and WCW-4 in the same drainages below the site. The MRP refers to 2 maps for the locations of these sites; Plate 15 shows them, but Plate 2 shows only WCW-1 and WCW-2, and Plate 2A, which will replace Plate 2 upon approval of this amendment, shows none of them. The

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Permittee needs to either add the WCW monitoring points to Plate 2 (Plate 2A), or revise the text on the pages indicated in the following table that refers to Plate 2 for the locations of these monitoring points.

	Section	Page
Surface water monitoring locations are shown on Plate 2.	301.330	3-14
Surface water monitoring stations are included on Plate 2.	301-510	5-1
Surface water monitoring locations are shown on Plate 2.	301-510	5-3
<i>See R645-301-723 and Plates 2A and 15</i>	722.300	7-8

**Permit Area Boundary Maps**

Plate 29, the Vegetation Map, shows both the old and new Right of Way boundaries, labeled as "Existing" and "Proposed" Permit Boundary, respectively. The Permittee needs to correct the "Existing" and "Proposed" Permit Boundary labels on Plate 29.

The Permittee is not reducing the Permit Area to match the new Disturbed Area (approximately 73.26 acres), but is leaving the Permit area as the old right-of-way (approximately 100 acres). The new disturbance will fall within this Permit Area, as shown on Plates 1B and 2A.

**Surface and Subsurface Manmade Features Maps**

In addition to buildings used in operation of the Wildcat Loadout, Plates 1 and 2 identify shop and warehouse buildings, belonging to Hidden Splendor Resources, Inc., that are located within 1,000 feet of the permit area.

**Findings:**

The proposed amendment does not meet the requirements of the Utah Coal Mining Rules. Before this amendment can be approved, the Permittee must address the following deficiency in accordance with:

**R6345-301-731.730**, The Permittee needs to add the locations for WCW-1, WCW-2, WCW-3, and WCW-4 to Plate 2 (Plate 2A), or revise the text on the pages indicated in the following table that refers to Plate 2.

	Section	Page
Surface water monitoring locations are shown on Plate 2.	301.330	3-14
Surface water monitoring stations are included on Plate 2.	301-510	5-1
Surface water monitoring locations are shown on Plate 2.	301-510	5-3

See R645-301-723 and Plates 2A and 15 .	722.300	7-8
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(Repeat) R6345-301-141, -311, Plate 29, the Vegetation Map, has the old and new right-of way boundaries labeled as "Existing" and "Proposed" Permit Boundary, respectively. The new right-of way boundary is not becoming the Permit area boundary; the old right-of way boundary is to remain the Permit Area Boundary. The Permittee needs to correct the "Existing" and "Proposed" Permit Boundary labels on Plate 29.

## OPERATION PLAN

### HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

#### Analysis:

##### Surface-Water Monitoring

The Permittee monitors two stations in undisturbed drainages above the site (WCW-1 and WCW-3) and two stations in the same drainages below the site (WCW-2 and WCW-4). The Permittee samples these four sites quarterly. The Permittee checks sedimentation pond discharges and samples the outflow, if any is present, on a monthly basis. These sites are typically dry, and many years there is no reported flow or sample collected. The MRP states (Section R645-301-330) that Plate 2 shows the surface water-monitoring locations; however, only WCW-1 and WCW-2 are on the current Plate 2, and none of these sites are on Plate 2A, which will replace Plate 2 upon approval of this amendment. Surface water monitoring locations are shown on Plate 15 (Section R645-301-521.140).

Sections R645-301-711.300, -723, and -731.200 refer to Section R645-301-512.240 for Water Monitoring information. Prior to this amendment, Section 512.240 did contain Water Monitoring Plans, including Tables V-10 and V-11 that listed the parameters and monitoring protocol; however, all that information will be removed from the MRP with this amendment. The revised Section R645-301-512.240 does not contain any information on water monitoring; it does refer to Appendix R, but Appendix R does not contain information on water monitoring, either. It is not evident where information on water monitoring will be located in the revised

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MRP, if it is in the MRP at all. The Permittee must include a clear and concise water monitoring plan in the MRP.

Appendix J (p. 4) states that surface water monitoring plan has been described in Chapter IV, Part K, Section 8 of the PAP; this is a relict reference to the old format and does not match the format of the current MRP.

### **Acid- and Toxic-Forming Materials and Underground Development Waste**

The MRP states that refuse materials have been tested for toxic- or acid-forming characteristics and the results of these tests have been submitted to the Division: Appendix J contains a few analysis results. The Permittee states that test results show this material may be used as fill within the permit area. The Permittee has used refuse material as substitute fill for the past expansion of the Wildcat Loadout, and the Permittee intends to use this material as substitute fill for possible future expansion at the Wildcat loadout. This refuse material will not be reclaimed in place; it will be reclaimed separate from ordinary fill and covered with four feet of native fill prior to redistribution of topsoil. "It should be emphasized that upon final reclamation any refuse material which has been used in a fill situation will be removed and placed in the approved refuse disposal area. It will not be reclaimed in-place" (Section 512.230).

Measures to prevent drainage from refuse materials into surface water and ground water are described in section 512.230. Drainage from the refuse pile reports to sedimentation Pond F via ditches D-32, -33, and 34 (Plate 2A). Section R645-301-512.230 states that "...Drainage from the [coal processing waste] pile is carried to Pond F via disturbed ditch D-17, which is sized to carry runoff from the pile from a 100 year - 6 hour event as required. (See Table IV-13)"; however, ditch D-17 reports to Pond C, north of the Coal Storage Area – not Pond F, and there is no Table IV-13 in the MRP. The Permittee must correct these confusing statements.

### **Water-Quality Standards and Effluent Limitations**

Section R645-301-751 contains the Permittee's commitment that discharges of water from areas disturbed by coal processing and reclamation operations will be made in compliance with all Utah and federal water quality laws and regulations and with effluent limitations for coal mining promulgated by the USEPA as set forth in 40 CFR Part 434. The UPDES discharge point associated with sedimentation pond B will be transferred to new pond G.

### **Diversions: General**

The entire sedimentation and control plan, including impoundments, diversions and reclamation hydrology is in Appendix R, Sedimentation and Drainage Control Plan. Ditch and culvert locations are shown on Plate 2A, the Minesite Drainage Plan Response to DO-04

Culverts used as sedimentation pond overflows are sized to carry the 25-yr, 6-hr storm event. All other culverts are designed to carry the expected runoff from a 10-yr, 24-hr event (Appendix R, section 2.9). Culverts were sized using Flowmaster I, Version 3.43 (Appendix R, section 2.8).

All ditches are designed to carry the expected runoff from a 10-yr, 24-hr event. Minimum freeboard on ditches is 0.5 ft., which represents a minimum of 20% of the flow depth. Ditches that exhibit expected flow velocities greater than 5 fps, based on the 10-yr, 24-hr event, will be lined with rip-rap, belting, or half-round culvert for erosion protection (Appendix R, section 2.10). Typical cross-section and flow depth for all ditches are shown on Figure 3 Appendix R.

Except for undisturbed ditch UD-2, which will remain in place because it was installed prior to the current operation and has been shown to be adequate to carry a 100-yr, 6-hr precipitation event, all culverts and ditches are temporary (Appendix R, section 4.1). They will be removed as described in section 4 of Appendix R. This includes the culverts between the Upper and Lower Cells of the Permanent Impoundment (Plate 9). Figure 4 of Appendix R shows a typical cross section of a restored channel.

All diversions have been designed to minimize adverse impacts to the hydrologic balance within the permit and adjacent areas, to prevent material damage outside the permit area and to assure the safety of the public.

#### **Diversions: Miscellaneous Flows**

Culverts used as sedimentation pond overflows are sized to carry the 25-yr, 6-hr storm event. All other culverts are designed to carry the expected runoff from a 10-yr, 24-hr event (Appendix R, section 2.9). All ditches are designed to carry the expected runoff from a 10-yr, 24-hr event (Appendix R, section 2.10).

#### **Sediment Control Measures**

Currently, straw bales, berms, and vegetation are used alone or in combination for sediment control on seven small ASCAs that treat 9.05 acres of the disturbed area; locations are shown on the currently approved version of Plate 2. Under the proposed revision, new ASCA 8

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will treat an additional 0.27 acres on the outslope of new sedimentation Pond G (Appendix R, section 2.11). The new Plate 2A shows the eight ASCAs.

Prior to removal of the sedimentation ponds, a series of 3 silt fences will be installed across the main drainage channel below each pond area (Plate 10; Appendix R, section 4.2). The silt fences will be maintained until the disturbed area is revegetated and stabilized. They will remain in place at least two years after the last augmented seeding. Siltation structures may include straw bales, silt fences or filter baskets. Removal will be contingent upon revegetation and stabilization of the area as well as DOGM concurrence. Following removal, the area will be revegetated in accordance with the reclamation plan (Section 353.110).

**Siltation Structures: Sedimentation Ponds**

There are currently six sedimentation ponds, designated as A through F, at the Wildcat Loadout Site, plus the Permanent Impoundment and Depression Area. Existing sedimentation ponds A, C, D, E and F, as well as the Permanent Impoundment and Depression Area will not be changed by this amendment. Existing sedimentation Pond B will be eliminated and replaced with new Pond G. Locations are shown on Plate 2(A) and each pond is detailed on Plates 3A through 3I.

Appendix R contains design information for the sedimentation ponds. The sedimentation ponds are designed to contain runoff from a 10-yr, 24-hr event of 1.85 inches, plus a minimum of 3 years sediment storage (Appendix R, 3.4 Sediment Pond Summary). Reclamation designs for permanent structures (Depression Area and Permanent Impoundment) are based on the 100-yr, 6-hr event of 1.91 in (Appendix R, 2.1 Precipitation).

Discharge from Ponds A, C, D, E, F, and G will be in accordance with the approved UPDES Permit (Appendix R, section 3.4 Sediment Pond Summary); discharges from the Permanent Impoundment and Depression Area are not covered by the UPDES permit.

Table 15 of Appendix R shows that the Permanent Impoundment is now large enough to fully contain a 100-yr, 6-hour event. The Permanent Impoundment will remain after reclamation, but culverts C-15 and C-16 between the two cells will be removed and replaced with an open-channel spillway (Plate 9). *[The following information is in the current MRP but has been removed from the proposed amendment. A previous owner of the loadout site constructed the upper cell of the Permanent Impoundment - a vegetated basin - to capture natural drainage from the canyon west of the Wildcat Loadout. The Permittee surveyed the upper cell and, upon determining that the upper cell was inadequate to contain runoff from a 100-year, 6-hour event, built the second, lower cell.]*

Table 16 of Appendix R shows that the Depression Area is large enough to fully contain a 100-yr, 6-hour event. The Depression Area will remain after reclamation; runoff will continue



to pond against the pre-existing Utah Railway rail bed because drainage around, under, or through the railroad right-of-way was never planned or constructed.

### **Discharge Structures**

Rip-rap, culverts, concrete, or other protection will be placed at all inlets and outlets to prevent scouring (Appendix R, section 3.1).

Information on discharge structures is summarized in Table 25 of Appendix R. All principle spillways are sized to carry the runoff from a 25-yr, 6-hr event. New pond G will be equipped with a 24 inch cmp principal overflow and a cmp emergency overflow of the same size. Each emergency overflow will be at least 1.0 ft above the primary overflow and at least 2.0 ft below the top of the embankment (Appendix R, section 3.1, b). The Permanent Impoundment is fitted with 18 inch cmp principal and emergency overflows that are sized to carry runoff from a 100-year, 6-hour event (Table 25).

### **Findings:**

Hydrologic Operation Information is not sufficient to meet the requirements of the Coal Mining Rules. Before this amendment can be approved, the Permittee must address the following deficiency in accordance with:

**R645-301-731.200**, Sections R645-301-711.300, -723, and -731.200 refer to Section R645-301-512.240 for Water Monitoring information. Prior to this amendment, Section 512.240 did contain Water Monitoring Plans, including Tables V-10 and V-11 that listed the parameters and monitoring protocol; however, all that information will be removed from the MRP with this amendment. The revised Section R645-301-512.240 does not contain any information on water monitoring; it does refer to Appendix R, but Appendix R does not contain information on water monitoring either. It is not evident where information on water monitoring will be located in the revised MRP, if it is to be in the MRP at all. The Permittee must include a clear and concise water monitoring plan in the MRP, including a Reclamation Monitoring Plan.

**R645-301-121.200**, Measures to prevent drainage from refuse materials into surface water and ground water are described in section 512.230. Drainage from the refuse pile reports to sedimentation Pond F via ditches D-32, -33, and -34 (Plate 2A); however, Section R645-301-512.230 states that "...Drainage from the [coal processing waste] pile is carried to Pond F via disturbed ditch D-17, which is sized to carry runoff from the pile from a 100 year - 6 hour event as required. (See Table IV-13)".

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- ditch D-17 reports to Pond C, north of the Coal Storage Area – not Pond F, and
- there is no Table IV-13 in the MRP.

The Permittee must correct these confusing statements.

## MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

### Analysis:

#### Affected Area Maps

The new disturbance will fall within the Permit Area Boundary, as shown on Plates 1B and 2A.

Plate 29, the Vegetation Map, shows both the old and new Right of Way boundaries, labeled as “Existing” and “Proposed” Permit Boundaries, respectively. The Permittee is not reducing the Permit Area to match the Disturbed Area. The old right-of-way boundary, i.e., the Existing Permit Boundary on Plate 29, will remain the Permit Area Boundary under the proposed amendment, and the new right-of-way boundary is not proposed to be the new permit boundary, as Plate 29 implies. The Permittee needs to correct the “Existing” and “Proposed” Permit Boundary labels on Plate 29.

#### Monitoring and Sampling Location Maps

The MRP states (Section R645-301-330) that Plate 2 shows the surface water-monitoring locations, but they are not on Plate 2A, which will replace Plate 2 upon approval of this amendment.

### Findings:

The proposed amendment does not meet the requirements of the Utah Coal Mining Rules. Before this amendment can be approved, the Permittee must address the following deficiency in accordance with:

**R645-301-731.730**, The Permittee needs to add the locations for WCW-1, WCW-2, WCW-3, and WCW-4 to Plate 2 (Plate 2A).

**(Repeat) R6345-301-141, -311**, Plate 29, the Vegetation Map, has the old and new right-of way boundaries labeled as “Existing” and “Proposed” Permit Boundary, respectively. The new right-of way boundary is not becoming the Permit area boundary; the old right-of way boundary is to remain the Permit Area Boundary. The Permittee needs to correct the “Existing” and “Proposed” Permit Boundary labels on Plate 29.

## RECLAMATION PLAN

### HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

#### Analysis:

##### Hydrologic Reclamation Plan

The discussion on reclamation in Section 240 (Phase I on page 2-16 and Phase II on page 2-19), Section 242.310, and Section 541 (Phase I on page 5-109 and Phase II on page 5-112 and page 5-116) does not include the reclamation of Pond G but does discuss the reclamation of Pond B, which will not exist at the time of final reclamation if this amendment is approved and the Permittee follows through with the proposed plan. The Permittee needs to add reclamation of Pond G in these sections, and any other applicable text where the ponds are discussed.

#### Findings:

**R645-301-121.200, -542**, In the discussion on reclamation in Section 240 (Phase I on page 2-16 and Phase II on page 2-19), Section 242.310, and Section 541 (Phase I on page 5-109 and Phase II on page 5-112 and page 5-116), the Permittee needs to add reclamation of Pond G.

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## MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

### Analysis:

Reclamation Hydrology is discussed in Appendix R, section 4.1. Upon completion of operations, all structures will be removed and the area will be recontoured as shown on Plate 10.

All culverts will be removed. All ditches except UD-2 will be removed; UD-2 will remain in place because it was installed prior to the Wildcat Loadout operation and has been shown adequate to carry a 100-yr, 6-hr event.

All sediment ponds will be removed during final reclamation, and recontoured as shown on Plates 9 and 10. As sediment ponds are removed, any contaminated material will be hauled to an approved disposal site. Although this isn't clear from Plate 10, Plate 9 shows the 2-celled Permanent Impoundment will be left in place; it will serve as wildlife habitat enhancement. The Depression Area will also remain after reclamation, and runoff will continue to pond against the pre-existing Utah Railway rail bed because drainage around, under, or through the railroad right-of-way was never planned or constructed; although Section 542.320 does not include the Depression Area with permanent facilities to be left at reclamation, several other sections of the MRP state that it will remain after reclamation and it is shown on Plates 9 and 10.

### Reclamation Monitoring and Sampling Location Maps

Sections R645-301-711.300, -723, and -731.200 refer to Section R645-301-512.240 for Water Monitoring information. Prior to this amendment, Section 512.240 did contain Water Monitoring Plans, including Tables V-10 and V-11 that listed the parameters and monitoring protocol; however, all that information will be removed from the MRP with this amendment. The revised Section R645-301-512.240 does not contain any information on water monitoring; it does refer to Appendix R, but Appendix R does not contain information on water monitoring, either. It is not evident where information on water monitoring will be located in the revised MRP, if it will be in the MRP at all. The Permittee must include a clear and concise water monitoring plan, including Reclamation Monitoring, in the MRP.

### Findings:

The proposed amendment does not meet the requirements of the Utah Coal Mining Rules. Before this amendment can be approved, the Permittee must address the following deficiency in accordance with:

**R645-301-761, -763.200, -764, -121.200,** The Permittee needs to clarify on Plate 10 that the 2-celled Permanent Impoundment will be left in place for final reclamation: Plate 10 indicates that it will be removed, but the text in the MRP and Plate 9 indicate that it will remain in place at final reclamation.

**(Repeat) R645-301-731.200,** The Permittee must include a clear and concise water monitoring plan, including Reclamation Monitoring, in the MRP.

**RECOMMENDATIONS:**

The Division should not approve this proposed amendment until the Permittee has adequately addressed the deficiencies identified in this Tech Memo.